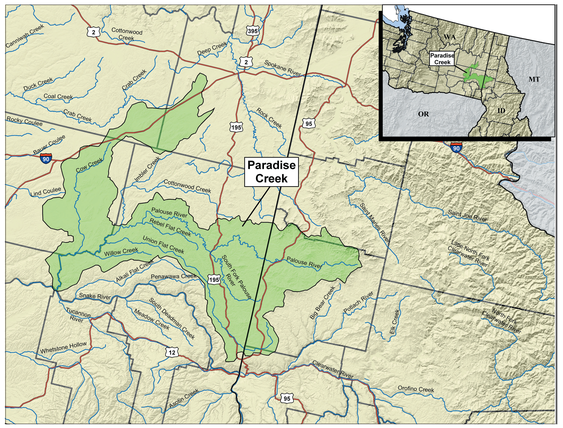
United States Department of Agriculture

Conservation Effects Assessment Project (CEAP)

Paradise Creek Watershed, Idaho: 2004-2007

A CSREES* Competitive Grant Watershed, one of 24 CEAP watershed projects.



CEAP Assessment

Apply statistical methods and geospatial modeling to investigate the effectiveness of multiple conservation practices and determine optimal scenarios for watershed restoration based on physical and socio-economic characteristics.

Watershed Description

- 12,000 acres
- 69.5% crop land, 16% forest, 14.5% urban
- Paradise Creek is an impaired waterbody under the Clean Water Act with an approved Total Maximum Daily Load (TMDL).
- A TMDL had been established for ammonia, total phosphorus, sediment, pathogens, and temperature.
- Watershed is a Clean Water Act Section 319 grant demonstration project.

Issues: Soil erosion, sediment transport

*Cooperative State Research, Education, and Extension Service

Approach

Water sampling: Flow, turbidity, temperature and electrical conductivity (EC), event-based total suspended solids (TSS) sampling, pre-and post-best management practice (BMP) monitoring, water quality monitoring, U.S. Geological Survey daily flows

Watershed models: SMR (Soil Moisture Routing), WEPP (Water Erosion Prediction Project), CCHE1D (AGNPS channel network modeling component)

Assess practices: Direct seed rotation, water and control structures, buffer strips, stream restoration

Communicating Results

Three annual reports, scientific meetings, publications.

Collaborators

- USDA, U.S. Forest Service, Rocky Mountain Research Station
- USDA, Natural Resources Conservation Service
- Latah County Soil and Water Conservation District
- University of Idaho
- Palouse Clearwater Environmental Institute
- Soil Conservation Commission
- Local farmers and operators

Contacts

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Researchers in the Paradise Creek watershed are trying to clean up the water in the creek by planting forest buffers (background) and a no-till grass buffer strip (lower left) to provide filters for run-off water from the mountains in the background.

A forested buffer strip of small pine trees has been planted in the Paradise Creek watershed to filter run-off water protecting the pond below.

Paradise Creek stream monitoring station.

Timeline

2003
Initial funding

2004
August CEAP bibliographies

2005
May Wetlands peer review
July Wildlife literature review (program-based)
October Cropland literature reviews
Wildlife literature review (practice-based)
Wildlife Work Plan
November Wetlands Work Plan
December Draft findings—
Prairie Pothole region

2006
February Preliminary habitat quality models—
Prairie Potholes wetland region
March Preliminary National Assessment Report

2007
Fall National Assessment Final Report

2008
January CSREES Watershed final reports

www.nrcs.usda.gov/technical/nri/ceap/